

Measurement of liquid flow...

S/119/61/000/007/001/008
D247/D306

For sufficiently low values of Z the amplitude is independent of T₁. Sensitivity of the flowmeter can be increased at the expense of range of measurement. In addition, a correction for temperature effects is necessary. The simplest method of measurement of velocity of flow in a pipe consists of the measurement of time required for the molecules of liquid to traverse a known length of pipe. The use of this method excludes the need for calibration and permits the measurement of velocity of flow of one of the phases in a polyphase liquid. This method can be applied to the measurements of velocity of gaseous-liquid mixtures. The liquid flow measurement can be based on so-called "apparatus effect" which takes place if a flow transmitter has a form of a circular path. The nuclear resonance occurs at a frequency of oscillating field differing from the frequency of nuclear precession by E,

$$\Delta \omega = \frac{\omega}{2\pi d} \times$$

$$\times \ln \frac{S_{max}}{S_{min}} \text{ cycles}$$

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Measurement of liquid flow...

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where S_{max} and S_{min} - maximum and minimum radii of nuclear path in the transmitter; d - pipe diameter; w - velocity of liquid flow, assumed uniform throughout the cross section. In this way, if the frequency difference is measured at which a signal of nuclear resonance is observed on a rectilinear section of pipe ($S = \infty$) and on a rounded section, both placed in the same magnetic field, the velocity of flow becomes F .

$$w = \frac{2\pi\Delta\nu d}{\ln \frac{S_{max}}{S_{min}}}$$

Transmitters having yet different shape and construction can be used with success. The method is covered by the author's certificate No. 125906 and No. 131517. There are 4 figures and 4 Soviet-bloc references.

Card 5/5

S/170/61/004/005/009/015
B111/B214

AUTHOR: Zhernovoy, A. I.

TITLE: A new method for the investigation of the longitudinal turbulent diffusion in a pipe line

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 4, no. 5, 1961, 91-93

TEXT: The direct method for the investigation of molecular diffusion through a cross section consists in labelling the molecule on one side of the cross section and following its appearance on the other side in a certain time. This can be done by the use of tracer atoms. The difficulty consists in having a sharp boundary between the labelled and the unlabelled liquid. An investigation of the nutation effect showed that with its help a sharp boundary could be obtained separating the polarized and the unpolarized liquid. For this purpose, use is made of an arrangement shown in Fig. 1. If no resonance with the oscillating field appears in the coil 2, the nuclear resonance signal can be determined at the detector. If, however, a resonance appears in it the magnetization vector goes steeply to zero. The time elaps-
ing is

$$T = \frac{6}{\gamma \Delta H_1}$$

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A new method ...

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B111/B214

where ΔH_1 is the inhomogeneity of the external magnetic field perpendicular to the liquid current, and γ is a constant. By means of the nuclear resonance method, one part of the liquid can be polarized while the other cannot be polarized. The length of the unpolarized liquid in the first moment is equal to $W_{\text{mean}} \cdot T$ (W_{mean} = mean velocity of the molecule). At the instant at which the first layer of separation enters the coil 4 the nuclear resonance signal decreases; at the instant at which the second layer leaves coil 2 the decrease of the signal amplitude ceases. It is thus possible to record the layer of separation accurately. If the time interval Δt in which the amplitude of the signal completely vanishes is known, the length of the diffusion boundary can be determined. In this case, the diffusion coefficient is given by the formula:

$$D_t = \frac{l_d^2 W_{\text{mean}}}{8 l_0 \ln \frac{l_d \gamma \Delta H_1}{6 W_{\text{mean}}}}, \text{ where } l_0 \text{ is the length of the pipe}$$

line. Three experiments were performed: 1) $W_{\text{mean}} = 427 \text{ cm/sec}$, $l_d = 12 \text{ cm}$,

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A new method ...

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$H = 0.1$ A oe/ohm, $D_t = 21$ cm²/sec; 2) $\Delta t = 0.12$ sec, $l_o = 114.5$ cm, $l_d = 11.4$ cm, $l_a = 15$ cm (l_a - length of the absorption coil); $W_{mean} = 219$ cm/sec, $D_t = 6$ cm²/sec; 3) $\Delta t = 0.08$ sec, $l_o = 10$ cm, $l_d = 2.5$ cm, $l_a = 15$ cm, $W_{mean} = 219$ cm/sec, $D_t = 4.7$ cm²/sec. There are 1 figure and 2 Soviet-bloc references.

ASSOCIATION: Institut inzhenerov zheleznodorozhnogo transporta im. akad. V. N. Obrastsova, g. Leningrad (Institute of Railway Transport Engineering imeni Academician V. N. Obrastsov, Leningrad)

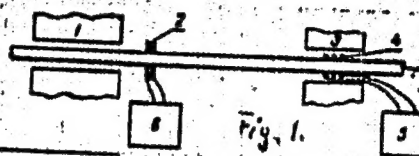
SUBMITTED: October 21, 1960.

Legend to Fig. 1: Block scheme:

- 1) Strong magnet for polarization,
- 2) coil for the production of nutation,
- 3) magnet for the production of a

homogeneous magnetic field, 4) coil for the pick-up of the nuclear resonance, 5) nuclear resonance detector, 6) r-f

Card 3/3.



ZHERNOVOY, A.I.

Absolute method for determining the sign of gyromagnetic ratio
in experimenting with a flow transducer. Prib.i tekhn.eksp. 6
no.5:182-183 S-0 '61. (MIRA 14:10)

1. Leningradskiy institut inzhenerov zheleznodorozhnogo transporta.
(Nuclear magnetic resonance and relaxation)

ZHERNOVOY, A.I.; ARKHANGEL'SKIY, A.A.; LATYSHEV, G.D., akademik

Using nuclear resonance in magnetic flaw detection. Vest.AN Kazakh.
SSR 17 no.3:105-107 Mr '61.
(MIRA 14:3)

1. Akademiya nauk KazSSR.
(Metals--Defects) (Nuclear magnetic resonance)

39308
S/707/62/005/000/009/014
D290/D308

9.2574

AUTHORS:

Zhernovoy, A.I. and Latyshev, G.D.

TITLE:

The relation between the frequency of a nuclear resonance maser and the parameters of the apparatus

SOURCE:

Akademiya nauk Kazakhskoy SSR. Institut yadernoy fiziki. Trudy, v. 5. Alma-Ata, 1962. Fizika chastits vysokikh energiy. Struktura yadra, 112-116

TEXT:

The authors studied a system consisting of a tuned circuit linked with a coil containing a specimen that is in a magnetic field of H oersted; they found a relation between ω_0 the resonant frequency of the circuit, ω_n the resonant frequency of the nuclei in the specimen in a magnetic field of H oersted, and ω the frequency of the signal induced in the tuned circuit by the relaxation of the polarized nuclei on the circuit was equivalent to a effect of the complex magnetic susceptibility; they related this susceptibility to the properties of the nuclei and the impedance of the circuit

Card 1/2

18.8300

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33473

S/170/62/005/002/005/009
B104/B138

AUTHOR: Zhernovoy, A. I.

TITLE: Measurement of large relaxation times in a continuous stream of liquid

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 5, no. 2, 1962, 64 - 71

TEXT: A stream of liquid flows through a pipe, first through a powerful polarizing field and then through a section with a pickup at its end. The liquid is polarized with a shielded magnet having a volume of 400 cm³ between the pole pieces. The field strength is 10,000 oe. Relaxation times ranging from 0.3 to 6 sec were measured by two methods. In the first, the length of the pipe was continuously varied between the polarizing field and the pickup. In the second, calibrated pieces were inserted between the polarizing field and the pickup. The optimum volume of polarized liquid, the ranges of measurement, and the least error were determined. This arrangement was used to test the corrosion of a metal. The relaxation time was determined for a 0.15% solution of HCl in water, into which pieces of iron coated with poor quality acid-resistant varnish had been

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Measurement of large ...

immersed. The relaxation time was shortened by the occurrence of iron ions in the water. The ion concentration was measured with a calibration curve plotted from the relaxation times of water with different FeCl_3 concentrations. There are 3 figures and 31 references: 6 Soviet and 25 non-Soviet. The four most recent references to English-language publications read as follows: Solomon I. J., Phys. Rad., 20, no. 8, 788, 1959; Das T. P., Saha A. K., Phys. Rev., 93, 749, 1954; Hahn E. L., Phys. Rev., 6, no. 11, 4, 1953; Chiarotti G., Guilotto L., Phys. Rev., 93, no. 6, 1241, 1954.

ASSOCIATION: Institut inzhenerov zheleznodorozhnogo transporta, g. Leningrad (Institute of Engineers of Railroad Transportation, Leningrad)

SUBMITTED: June 8, 1961

Card 2/2

36865
S/170/62/005/005/015/015
B104/B102

5.1175
AUTHOR: Zhernovoy, A. I.

TITLE: A new method of measuring the flow rate of liquids by using nuclear magnetic resonance

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 5, no. 5, 1962, 112 - 115

TEXT: By means of a solution of Bloch's equation the vector of nuclear magnetization of the liquid in the volume V_A (Fig. 1) is given by

$$M = \chi_0 H_n \left[1 - \exp \left(-\frac{V_n}{qT_1} \right) \right] \exp \left(-\frac{V_n}{qT_1} \right) \times \quad (4). \\ \times \exp \left[-\frac{V_n}{q} \left(\frac{1}{T_1} + \frac{1}{T_2} \right) \right] \cos \gamma H_1 \frac{V_n}{2q}.$$

With increasing magnetic field intensity H_1 of coil 1 the signal intensity disappears periodically. The values of H_{10} at which the signal

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A new method of measuring the ...

intensity becomes zero are connected with the flow rate of the liquid:
 $H_{10} = q(2n-1)\pi/\gamma V_H$ (5). Knowing the a-c field intensity in the coil 1
at which the nuclear resonance signal disappears one can determine the
flow rate q of the liquid. The error in measuring q is:
 $\Delta q/q = 2/a(2n-1)\pi$. The method allows a continuous recording of the
absolute value and has a small inertia; it needs no highly homogeneous
magnetic field and no toroidal tube. There is 1 figure.

SUBMITTED: December 11, 1961

Fig. 1. Setup of a flow rate measurement. Legend: (1), (2) rf coils;
(3) rf generator; (4) nuclear magnetic resonance detector; (H_n) magnetic
field intensity; (V_n), (V_H) and (V_A) tube volumes.

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TOPIC TAGS nuclear magnetic resonance

Card 1/2

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ACCESSION NR AP3003701

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ASSOCIATION none

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DATE ACQ: 02Aug63

ENCL: 00

SUB CODE: SD, PH

NO REF SOV: 000

OTHER: 000

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Card 1/2

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0 1 2 3 4 5 6 7 8 9

The entire document is classified as "Secret" and is not to be released to the public without the express written approval of the CIA.

ASSOCIATION none

SUBMITTED: 00

DATE: 11/1/1960

BY: 00

SUB CODE: SD, PH

NO REP SOV: 000

OTHER: 000

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[illegible]

USFV: The main function of the - bar - system is to

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Card 21

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CIA-RDP86-00513R002064720009-1"

ZHERILOVOY, Aleksandr Ivanovich; LATYSHEV, Georgiy Dmitriyevich;
MEL'NIKOVA, A.I., red.

[Nuclear magnetic resonance in a flowing liquid] IAdernyi
magnitnyi rezonans v protochnoi zhidkosti. Moskva, Atom-
izdat, 1964. 252 p. (MIRA 17:6)

ZHERNOVOY, A.I.; RUKHIN, A.B.

Setup for measuring the spin-lattice relaxation time in nuclei
of a liquid in contact with a powder. Izv. AN Kazakh. SSR.
Ser. fiz.-mat.nauk no. 2:63-69 '63. (MIRA 17:6)

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L 8621-66 EAT(1) LJP(a) MM/00

ACC NR. AP5027038

SOURCE CODE UR/0120/65/000/005/0230/0221

AUTHOR: Zhernovoy, A.I.; Stakhov, O.V.; Fedorov, N.D.

ORG: Institute of Nuclear Physics, AN KazSSR, Alma-Ata (Institut yadernoy fiziki AN KazSSR)

TITLE: The measurement of strong magnetic fields by means of an NMR flow sensor

SOURCE: Pribery i tekhnika eksperimenta, no. 5, 1965, 220-221

TOPIC TAGS: NMR, strong magnetic field, magnetic field measurement, flow research, electromagnet

ABSTRACT: NMR detectors with fixed probes are often used for the recording and stabilization of strong magnetic fields. However, in addition to the need for various exchangeable sensors, it is often necessary to either place a part of the electronic circuitry into the magnetic gap or increase the length of the HF cable. Since both approaches are far from satisfactory, the authors introduce a flow of liquid which is subsequently used for the NMR measurement of the field of a ϕ 1.5 m pole piece electromagnet. The measurements are based on the nutation method applied to the nuclei of the liquid; these nuclei are polarized within the magnetic field under investigation, while the recording of the resonance is carried out by the NMR sensor located outside the field under study within an auxiliary field of a permanent magnet. The article presents a description of the device and outlines the characteristics of the strong magnetic field measurements. The minimum value of the recorded field

Card 1/2

UDC: 639.283.078

L 8621-66

ACC NR: AP5027039

(limited basically by the signal-to-noise ratio at the exit of the NMR indicator) is in the 300 - 500 Oe region, the maximum (depending on the HF power supply circuit) can be extended above 25 kOe ($f > 100$ Mc) provided powerful generators or specially matched coil HF generator pairs are used. The theoretical recording accuracy does not exceed 10^{-5} in principle, it was no better than $5 \cdot 10^{-5}$ since the frequency tuning of the Cr^{3+} generator did not allow sufficiently accurate frequency adjustments. Authors thank A. A. Skazoduk for his help. Orig. art. has: 1 formula and 1 figure.

SUB CODE: NP, EM / SUBM DATE: 27Jun64 / ORIG REF: 001

Jrn

Card 2/2

ZHERNOVOY, A.I.; STAKHOV, O.V.; FEDOROV, N.D.

Measurement of strong magnetic fields by means of a flow
transducer of nuclear magnetic resonance. Prib. i tekhn. eksp.
10 no.5:220-221 S-O '65.

(MIRA 19:1)

1. Institut yadernoy fiziki AN Kazakhskoy SSR, Alma-Ata.
Submitted June 27, 1964.

ZHERNOVOY, A.I., kand.fiziko-matemat.nauk

Self-exciting device with a flow-through transmitter of nuclear
resonance. Vest. AN Kazakh.SSR 20 no.11:72-73 N '64.

(MIRA 18:2)

YEKATERININ, V.V.; ZHERNOVOY, A.I.; STAKHOV, O.V.-

The IAMR pulse-frequency flowmeter. Izv. tekhn. no.3:54-56 Mr '65.
(MIRA 18:5)

ZHERNOVOY, A.I.; STASEVICH, V.M.

Flowmeter based on the principle of nuclear magnetic resonance.
Izv. vys. ucheb. zav.; prib. 8 no.2:45-48 '65.

(MIRA 18:5)

1. Institut yadernoy fiziki AN Kazakhskoy SSR.

ZHERNOVOY, A.I.; POLYAKOV, A.I.; YAKOVLEV, G.I.

Effect of nuclear mutation in inhomogeneous magnetic fields.

Izv. AN SSSR Ser. fiz. 29 no.2:304-305 F '65.

(MIRA 18:3)

ZHERNOVOY, A.I.; POLYAKOV, A.I.; YAKOVLEV, G.I.

Width of the nuclear magnetic resonance line in a flow transducer.
Izv. AN SSSR Ser. fiz. 29 no.2:311-312 F '65.

Nonresonance mutation of nuclei in nuclear magnetic resonance.
Ibid.:313-314 (MIRA 18:3)

ZHERNOVOY, A.I.; PIVOVAROV, S.P.

Direct method for large T_1 time measurements in a moving liquid.
Prib. i tekhn. eksp. 9 no. 4:104-106 J1-Ag '64. (MIRA 17:12)

1. Institut yadernoy fiziki AN KazSSR.

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LATYSHEV, G.D., akademik; ZHERNOVOY, A. I., kand. fiziko-matemat. nauk

Nonresonance methods for the demagnetization and magnetic reversal
of nuclei in a flowing liquid. Vest. AN Kazakh. SSR. 19 no.8:
32-35 Ag '63. (MIRA 17:7)

YEKATERININ, V.V.; ZHERNOVOY, A.I.; YAKOVLEV, G.I.

Nuclear magnetic resonance spectrometer in a weak field.
Izv. AN Kazakh. SSR. Ser. fiz.-mat. nauk no. 2:58-62 '63.
(MIRA 17:6)

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CIA-RDP86-00513R002064720009-1"

FIVOVAROV, S.P.; RYABIKIN, Yu.A.; ZHERNOVOY, A.I.; LATYSHEV, G.D.

Apparatus for the stabilization of inhomogeneous magnetic fields
based on the electron paramagnetic resonance method. Izv. AN SSSR
Ser. fiz. 29 no.1:166-167 Ja '65. (MIRA 18:2)

YEKATERININ, V.V.; ZHERNOVOY, A.I.; SHEVELENKO, V.D.

Magnetic field stabilizer operating on the basis of a spin generator.
Izv. AN SSSR Ser. fiz. 29 no.1:168-171 Ja '65.

(MIRA 18:2)

ZHERNOVOY, A.I.; YAKOVLEV, G.I.

Observation of negative hydration by the method of nuclear magnetic resonance. Zhur.strukt.khim. 4 no.6:914 N-D '63. (MIRA 17:4)

1. Institut yadernoy fiziki AN KazSSR.

SAPQZHENKOV, Yu.F.; GORELOV, Yu.K.; ZHERNOVOY, I.V.; SVYATOY, V.I.

Distribution and ecology of the ratel (*Mellivora capensis indica* Kerr.) in Turkmenistan. Zool. zhur. 42 no.6:961-964 '63. (MIRA 16:7)

1. The State University of Moscow, Turkmenian Anti-Plague Station, Ashkhabad and Game Preserve of Badkhyz. (Turkmenistan—Ratel)

SERGOVANTSEV, V.T.; ARTEMOV, V.A.; ZHERNOVOY, M.N.; MOROTSKIY, L.P.

Using the pipes of a gas pipeline as a remote-control channel.
Gaz.delo no.1:14-16 '64. (MIRA 17:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut prirodnogo gaza i
Minskoye upravleniye magistral'nykh gazoprovodov.

ZHERNOVOY, N., nauchnyy sotrudnik

Over-all mechanization of haymaking. Nauka i pered. op v
sel'khoz. 9 no.6:25 Ja '59. (MIRA 12:9)

1. Kalininskaya gosudarstvennaya sel'skokhozyaystvennaya opytnaya
stantsiya.

(Hay--Harvesting)

"APPROVED FOR RELEASE: 03/15/2001

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APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002064720009-1"

TERENT'YEV, A.P.; SYAVTSILLO, S.V.; SAVUSHKINA, V.I.; ZHERNOVSKAYA, Ye.M.;
CHARKSKAYA, B.A.

Synthesis of 2-ethylanthraquinone, labelled by C^{14} carbon in the
nucleus. Dokl. AN SSSR 107 no.3:417-419 Mr '56. (MLRA 9:7)

1. Chlen-korrespondent AN SSSR (for Terent'yev).
(Anthraquinone) (Carbon--Isotopes)

KULIKOV, V.O.; BORNATSKIY, I.I.; ZARUBIN, N.G.; DOROFYEV, G.A.;
KALUZHSKIY, Ye.A.; KAZAKOV, A.A.; KOVAL', R.F.; KORNEVA, N.K.;
TRET'YAKOV, Ye.V.; TRUNOV, Ye.A.; Primalni uchastiye: ANDREYEV, V.L.;
GORDIYENKO, V.V.; GRINEVICH, I.P.; GUBAR', V.F.; DOLINENKO, V.I.;
ZHERNOVSKIY, V.S.; ZHIGALOVA, Z.I.; KOMOV, N.G.; KURAPIN, B.S.;
OLESHKEVICH, T.I.; PRIKHOZHENKO, Ye.

Mastering the operations of 650- and 900-ton (mega - gram) capacity
open-hearth furnaces at the Il'ich metallurgical plant. Stal' 25
no.8:805-807 S '65. (MIRA 18:9)

1. DONNIICHERMET i Zhdanovskiy metallurgicheskiy zavod imeni Il'icha.

YAKOVLEV, Yu.N., kand. tekhn. nauk; PANIOTOV, Yu.S.; THERMOVSKIY, V.S.;
BELYAYEV, Yu.P.

Slag formation and smelting in 650 and 900-ton capacity
open-hearth furnaces. Met. i gornorud. prom. no.6:24
N-D '64. (MIRA 18:3)

ZHERO, O.G.

Basic characteristics of the tectonics and oil potential of the basement in the northern part of the Turgay trough. Trudy SNIIGGIMS no.27: 25-34 '62. (MIRA 16:9)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki i mineral'nogo syr'ya.

(Turgay Gates--Geology, Structural)
(Turgay Gates--Petroleum geology)

ZHERO, O.G.

Reservoir properties of sandstones in Upper Paleozoic
sediments of the Kuznetsk Basin. Trudy SNIIGGIMS
no.17:113-122 '61. (MIRA 15:9)
(Kuznetsk Basin—Oil sands)

RUBANIK, V.G.; KORNEYCHIK, Zh.N.; MEL'NIK, A.F.; SOLONINOVA, I.N.;
ZHERONKINA, T.A.; KALUGIN, E.S.; TKACHENKO, V.S.; BESSCHETNOV,
P.P.; PROTASOV, A.N.; PARAVYAN, A.V., doktor biol. nauk, otv.
red.

[List of trees and shrubs recommended for landscaping in
populated places of Kazakhstan] Spisok derev'ev i kustarni-
kov, rekomenduemykh dlia ozeleneniia naselennykh punktov Ka-
zakhstana. Alma-Ata, Izd-vo AN KazSSR, 1963. 85 p.

(MIRA 17:3)

1. Akademiya nauk Kazakhskoy SSR. Institut botaniki. 2. Glav-
noye upravleniya lesnogo khozyaystva i okhrany lesa Soveta
Ministrov Kazakhskoy SSR (for Tkachenko). 3. Kazakhskiy
sel'skokhozyaystvennyy institut (for Besschetnov, Protasov).

RUBANIK, V.G.; ZHERONKINA, T.A.

Grafting Siberian pine on Scotch pine in the Alma-Ata Botanical
Garden. Trudy Alma-At. bot. sada 7:76-85 '63. (MIRA 16:10)

RUBANIK, V.G., kand. biolog. nauk; ZHERONKINA, T.A.

Some data on the grafting of conifers. Vest. AN Kazakh.
SSR 18 no.10:90-93 0 '62.

(MIRA 17:9)

ZHERTVIN, Nikita Petrovich; TUNKOV, Vladimir Pavlovich; PERTSEV,
Mikhail Andreyevich; PAISOV, Aleksey Ivanovich; PCDVOYSKIY,
Lev Nikolayevich; KAZARNOVSKIY, L.Sh., red.; OZERETSKAYA, A.L.,
red. 1zd-va; KARASEV, A.I.; tekhn. red.

[Commercially pure iron] Tekhnicheski chistoe zhelezo. Moskva,
Metallurgizdat, 1962. 198 p. (MIRA 16:1)
(Iron)

ABLOV, A.V.; YABLOKOV, Yu.V.; ZHERU, I.I.

Electron paramagnetic resonance studies of the structure of certain copper acetates and copper chloroacetates. Dokl. AN SSSR 141 no.2:343-345 N '61. (MIRA 14:11)

1. Institut khimii Moldavskogo filiala AN SSSR i Fiziko-tekhnicheskoy institut Kazanskogo filiala AN SSSR. Predstavleno akademikom A.Ye. Arbuzovym.

(Copper acetate--Spectra)

ZHERU, I.I.

Use of the method of invariants in the theory of hyperfine interaction, Ukr. fiz. zhur. 10 no.7:726-733 J1 '65.

(MIRA 18:8)

1. Institut poluprovodnikov AN UkrSSR, Kiyev.

ZHERU, M.I.

Metasomatic and retrograde-metamorphic processes in the
carbonate rocks of the "Pereval" deposit (southern Lake Baikal
Region). Trudy IGEM no.48:161-174 '61. (MIRA 15:1)
(Baikal Lake region—Rocks, Carbonate)

ZHOU, M.I.

SIMONOV, A.I.; ZHOU, M.I., kina. geolog.-mineralog. nauk

Lithology of clays of the Orlbozhikhi deposit in the Moldavian
S.S.R. Izv. Mold. fil. AN SSSR no. 6247-68 '61 (MIRA 17:7)

ZHERU, M.I.

Magnesite in marbles of the "Pereval" deposit. Zap. Vses. min.
ob-va 88 no.5:591-594 '59. (MIRA 13:2)
(Baikal region--Magnesite)

AUTHORS: Syavtsillo, S. V., Savushkina, V. I., 30V/79-20-7-8/64
Zhernovskaya, Ye. M.

TITLE: The Synthesis of 2-Ethylanthrone and 2-Ethyl-10-Oxanthrone
Radioactivated by C^{14} in the Ring, and the Investigation of
Some of Its Properties (Sintez 2-etilantrona i 2-etil-10-oksant-
trona, mechenykh uglerodom C^{14} v yadre, i issledovaniye neko-
torykh ikh svoystv)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 20, Nr 7,
pp. 1752 - 1755 (USSR)

ABSTRACT: The authors synthesized the 2-ethylanthrone radioactivated
by C^{14} in the ring by means of the reduction of the 2-ethylan-
thraquinone also radioactivated by C^{14} (Ref 1). The reduction
was carried out analogous to that of anthrone (Ref 2).
2-ethylanthrone was obtained in pure state (melting point 62°);
it did not contain an enol form and it did not tautomerize on
long storing in solid form and in benzene solutions. Earlier
(Ref 3) the 2-ethylanthrone was obtained only in the mixture
with 2-ethylanthranol in the solution of 4-ethyl-diphenyl
methane carboxylic acid in concentrated sulfuric acid. The

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SOV/79-28-7-8/64
The Synthesis of 2-Ethylanthrone and 2-Ethyl-10-Oxanthrone Radioactivated by C^{14} in the Ring, and the Investigation of Some of Its Properties

final product melted at $67-75^{\circ}$. The hitherto not described 2-ethyl-10-oxanthrone ($92-93^{\circ}$) was obtained from the 2-ethylanthrone radioactivated by C^{14} according to the synthesis method by Meyer (Ref 4)(Mayyer), i.e. by bromination of the 2-ethylanthrone with subsequent saponification of the obtained product with 2-ethyl-10-bromanthrone radioactivated by C^{14} . In order to avoid the formation of oxidation products this bromination and the separation of the latter were carried out at low temperatures (-8 to -20°). Thus the radioactive 2-ethylanthrone (in a yield of 51%) radioactivated by C^{14} was for the first time synthesized, as well as the acetate of the ethyl anthranol and the 2-ethyl-10-oxanthrone (59%) radioactivated the same way in the ring. The hydration and oxidation of the mentioned compounds were carried out. There are 6 references, 3 of which are Soviet.

SUBMITTED: May 18, 1957
Card 2/3

The Synthesis of 2-Ethylanthrone and 2-Ethyl-10-Oxanthrone Radioactivated by C^{14} in the Ring, and the Investigation of Some of Its Properties

SOV/79-28-7-8/64

1. Ethyl derivatives--Synthesis 2. Ethyl derivatives--Properties 3. Ethyl derivatives--Radioactivity 4. Carbon isotopes (Radioactive)--Applications

Card 3/3

ZHERO, O.G.

Oil and gas potentials of the Kuznetsk Basin. Trudy SNIIGIMS
no.9:76-86 '60. (MIRA 14:7)
(Kuznetsk Basin--Petroleum geology)
(Kuznetsk Basin--Gas, Natural--Geology)

ZHERO, V.

The Polish Scientific Institute of the Sugar Industry Aiding the Production.
Leka Promishlenost (Light Industry), #7-12:43:July-Dec 1955

KRUTIKOV, A.; SELISHCHEV, G.; GABIS, V.; LIBERMAN, A.; KOMNOVA, L.;
BUT, A.; SUTANKIN, A.; ZHEROMSKAYA

Unremitting attention to self-service stores! Sov.torg. 33
no.7:12-13 JI '60. (MIRA 13:7)

1. Direktor moskovskogo magazina samoobsluzhivaniya "Gastronom" No.65 (for Krutikov).
 2. Direktor moskovskogo magazina samoobsluzhivaniya "Gastronom" No.64 (for Selishchev).
 3. Direktor magazina No.65 Moskvoretskogo RPT (for Gabis).
 4. Direktor moskovskoy bulochnoy No.44 (for Liberman).
 5. Direktor moskovskoy bulochnoy No.367 (for Komnova).
 6. Direktor moskovskogo magazina samoobsluzhivaniya "Mosovoshch" (for But).
 7. Direktor moskovskogo magazina samoobsluzhivaniya No.78 "Mosmoloko" (for Sutankin).
 8. Zamestitel' direktora magazina No.22 "Ogonek" Sverdlovskogo RPT (for Zheromskaya).
- (Self-service stores)

ZHERSHNEV, V., podpolkovnik tekhnicheskoy sluzhby

Innovator. Voen. vest. 41 no.9:24-25 S '61. (MIRA 15:1)
(Shooting, Military--Equipment and supplies)

ZHERTOVSKIY, A.N., elektromekhanik; KONURIN, I.M., starshiy
elektromekhanik; VOROB'YEV, A.N.; GORODETSKIY, N.P.,
elektromekhanik

Efficiency experts suggest. Avtom., telem. i svyaz' 4
no.1:32-33 Ja '60. (MIRA 13:4)

1. Kremenchugskaya distantziya signalizatsii i svyazi Yuzhnoy
dorogi (for Zhertovskiy). 2. Yaroslavskaya distantziya signalizatsii
i svyazi Severnoy dorogi (for Konurin). 3. Starshiy inzhener
Moskovsko-Okrushnoy distantzii signalizatsii i svyazi Moskovskoy
dorogi (for Vorob'yev). 4. Krasnoarmeyskaya distantziya
signalizatsii i svyazi Donetskoy dorogi (for Gorodetskiy).
(Railroads--Electronic equipment) (Radio--Repair)

ZHERU, M. I., Candidate Geolog-Mineralog Sci (diss) -- "Mineralogical-petrographic characteristics and genesis of the rock of the 'Pereval' deposit (southern Baykalia)". Moscow, 1959, published by the Acad Sci USSR. 21 pp (Acad Sci USSR, Inst of Geology of Ore Deposits, Petrography, Mineralogy, and Geochem of the Acad Sci USSR), 175 copies (KL, No 25, 1959, 129)

ZHERU, M.I.

Red spinel in the Pereval marbles and its secondary transformations.
Izv. AN SSSR Ser. geol. 24 no.2:107-114 F '59.

(MIRA 12:3)

1. Institut geologii rudnykh mestorozhdeniy, petrografii,
mineralologii i geokhimii AN SSSR, Moskva.
(Slyudyanka District--Spinel)

AUTHOR:

Zheru, M.I.

SOV/11-59-2-8/14

TITLE:

The Ruby Spinel in the Marbles of the Pereval Deposit and its Secondary Transformations (Krasnaya shpinel' v mramorakh mestorozhdeniya Pereval i yey# vtorichnyye izmeneniya)

PERIODICAL:

Izvestiya Akademii nauk SSSR, Seriya geologicheskaya, 1959, Nr 2, pp 107-114 (USSR)

ABSTRACT:

The ruby spinel was found in the forsterite and dolomite-calcite marbles of the Pereval deposit near the town of Slyudyanka (Irkutsk Oblast). Almost all the marbles of the deposit underwent a series of postmagmatic transformations. The author describes in detail four types of such retrograde metamorphosis of the ruby spinel: the diopsidization, the phlogopitization, the carbonatization and the chloritization. He mentions the following geologists who worked in the region: B.Z. Kolenko, N. Voskoboynikova, D.S. Korzhinskiy, L.M. Lebedev, N.G. Sumin, P.V. Kainin and M.G. Zamuruyeva. There are 6 photos, 1 table, and 10 references, 9 of which are Soviet and 1 German.

Card 1/2

The Ruby Spinel in the Marbles of the Pereval Deposit and its Secondary Transformations

SOV/11-59-2-8/14

ASSOCIATION: Institut geologii rudnykh mestorozhdeniy, petrografii, mineralologii i geokhimii AN SSSR (The Institute of Geology of Mineral Deposit, Petrography, Mineralogy and Geochemistry of the AS of the USSR) Moscow

SUBMITTED: May 27, 1958

Card 2/2

ZHERU, M.I.

Talc in rocks of the Pereval deposit and its place in retrograde
metamorphism of the Archean formation in the Lake Baikal region.
Trudy IOEM no.63:130-142 '61. (MIRA 14:9)
(Baikal Lake region--Talc)

ZHERVE, G. K.

The testing of repaired asynchronous motors. Moskva, 1948. 137 p.
(49-51220)

TK2785.25

ZHERVE, G. K.

Industrial testing of electric machinery. Leningrad, Gos. energ. izd-vo, 1950.
352 p. (51-34500)

TK401.25

ZHERVE, G. E.

Technology

Calculation for rewinding the asynchronous motor. Leningrad, Gos. energ. izd-vo, 1951.

Monthly List of Russian Accessions, Library of Congress, April 1952. UNCLASSIFIED.

ZHERVE, G. K.

Leningrad, Gos. energ. izd-vo Leningradskoo otd-nie. 1951. 142 p. (54-35083)

TK2785.Z55

(Computation of a direct current machine during rewinding) Leningrad,
Gos. energ. izd-vo, 1952. 159 p. (54-18911)

TK2474.25

ZHERVE, Georgiy
ZHERVE, Georgiy Konstantinovich; RIVLIN, L.B., redaktor; ZABRODINA,
A.A., tekhnicheskii redaktor.

[Testing of electric machinery and transformers; manual for
workers in rural elektrification] Ispytanie elektricheskikh
mashin i transformatorov; rukovodstvo dlia rabotnikov sel'-
skokhoziaistvennoi elektrifikatsii. Moskva, Gos.energ. izd-vo
1955. 199 p. (MLRA 8:12)

(Electric machinery--Testing)

ZHERVE, Georgiy Konstantinovich; RIVLIN, L.B., redaktor; ZABRODINA, A.A.,
tekhnicheskii redaktor.

[Electrician's manual for testing electric machines] *Rukovodstvo
dlia elektromonterov po ispytaniyu elektricheskikh mashin.*
Moskva, Gos.energ.izd-vo, 1955. 283 p. (MLRA 8:12)
(Electric machinery--Testing)

ZHERVE, Georgiy Konstantinovich; RIVLIN, L.B., redaktor; ZABRODINA, A.A.,
tekhnicheskiy redaktor

[Calculating the rewinding of asynchronous motors] Raschet asin-
khronnogo dvigatelya pri peremotke. Izd. 2-oe. Moskva, Gos. energ.
izd-vo 1956. 151 p. (MIRA 9:9)
(Electric motors, Induction)

VORONETSKIY, V.V., kand. tekhn. nauk; ZHERVE, G.K., inzh.

New standard: Electric machines; general technical requirements.
Vest. elektroprom. 27 no.8:67-71 Ag '56. (MIRA 10:9)

1. Nauchno-issledovatel'skiy institut Ministerstva elektrotekhnicheskoy promyshlennosti (Voronetskiy). 2. Zavod "Elektrosila" imeni S.M. Kirova (for Zherve).
(Electric machinery)

PHASE I BOOK EXPLOITATION SOV/3637

Zherve, Georgiy Konstantinovich

Promyshlennyye ispytaniya elektricheskikh mashin (Industrial Testing of Electrical Machines) 2d ed., rev. Moscow, Gosenergoizdat, 1959. 504 p. 22,000 copies printed.

Ed.: L.B. Rivlin; Tech. Ed.: Ye.M. Soboleva.

PURPOSE: This book is intended for the technical personnel of electric machine-building plants, electric power stations, and other electric enterprises using electrical machines.

COVERAGE: The book deals with problems of industrial testing of electrical machines in conformance with operative standards. Tests common for machines of all types, as well as tests applied to each particular type of machine, are described. Since testing conditions may vary in different plants, the author submits two or more methods for each test, leaving the selection of the most suitable method to the personnel concerned. The author thanks Doctor of Technical Sciences R.A. Lyuter and Engineer L.B. Rivlin. There are no references.

Card ~~1/14~~

ZHERVE, Georgiy Konstantinovich; BERGMAN, P.Ya., red.; ZHITNIKOVA, O.S.,
tekh.n.red.

[Calculation of the stator winding of an asynchronous motor]
Kak rasschitat' obmotku statora asinkhronnogo dvigatel'ia.
Moskva, Gos.energ.isd-vo, 1960. 61 p. (Biblioteka elektro-
montera, no.26). (MIRA 14:1)
(Electric motors, Induction--Windings)

DOMBROVSKIY, Vyacheslav Vyacheslavovich; YEREMEYEV, Aleksandr
Sergeyevich; IVANOV, Nikolay Pavlovich; IPATOV, Pavel
Mikhaylovich; KAPLAN, Moiseye Yakovlevich; PINSKIY,
Grigoriy Borisovich; ZHERVE, G.K., nauchn. red.;
ZARITSKIY, Ya.V., red.

[Design of hydrogenerators] Proektirovanie gidrogenera-
torov. [By] V.V.Dombrovskii i dr. Moskva, Energiya.
Pt.1. 1965. 257 p. (MIRA 18:3)